R E P O R T R E S U M E S

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A THREE-YEAR LONGITUDINAL STUDY COMPARING INDIVIDUALIZED AND BASAL READING PROGRAMS AT THE PRIMARY LEVEL, AN INTERIM REPORT.

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DESCRIPTORS- *COMPARATIVE ANALYSIS, *READING RESEARCH, *READING ACHIEVEMENT, *READING PROGRAMS, *LONGITUDINAL STUDIES, INDIVIDUALIZED READING, BASIC READING, INSERVICE TEACHER EDUCATION, PROGRAM EVALUATION, EXPERIMENTAL GROUPS, GRADE 1, GRADE 2, GRADE 3, LAKESHORE CURRICULUM STUDY COUNCIL, WISCONSIN

AN INTERIM REPORT OF A 3-YEAR LONGITUDINAL STUDY COMPARING INDIVIDUALIZED AND BASAL READING PROGRAMS AT THE PRIMARY LEVEL BY THE LAKESHORE WISCONSIN CURRICULUM STUDY COUNCIL IS PRESENTED. DIFFERENT APPROACHES TO MATERIALS, PROCEDURES, GROUPING, AND SEQUENCE AS INTEGRAL PARTS OF THE READING PROGRAM WERE EXAMINED. INDIVIDUALIZED READING WAS DEFINED TO INCLUDE MATERIAL SELECTED BY STUDENTS WITH TEACHER GUIDANCE, TEACHER-PUPIL CONFERENCE AS THE INSTRUCTIONAL PROCEDURE, FLEXIBLE GROUPING, AND NONSEQUENTIAL SKILL DEVELOPMENT. IN THE BASAL APPROACH, MATERIAL WAS PRESELECTED, AND GROUP INSTRUCTION WAS PROVIDED. SKILLS WERE DEVELOPED SEQUENTIALLY. FOURTEEN FIRST-GRADE EXPERIMENTAL AND 14 FIRST-GRADE CONTROL CLASSROOMS PARTICIPATED ON A VOLUNTARY BASIS. CONTINUOUS INSERVICE TRAINING WAS CONDUCTED. DATA WERE DERIVED FROM THE SCIENCE RESEARCH ASSOCIATES (SRA) PRIMARY MENTAL ABILITIES TEST, METROPOLITAN ACHIEVEMENT TEST, SOCIOGRAMS, INTERVIEWS, LOGBOOKS, SELF-CONCEPT SCALES, QUESTIONNAIRES, THE SRA READING COMPREHENSION TEST, AND THE SRA VOCABULARY TEST. MEAN SCORES, Z SCORES, DIFFERENCE SCORES, AND F TESTS WERE USED TO ANALYZE THE DATA. CHILDREN IN INDIVIDUALIZED READING PROGRAMS SHOWED SIGNIFICANTLY BETTER READING ACHIEVEMENT THAN CHILDREN IN BASAL READING PROGRAMS. COMPLETE RESULTS, IMPLICATIONS, TABLES, REFERENCES, AND A SUMMARY REPORT OF A PILOT STUDY ON INDIVIDUALIZED READING ARE INCLUDED. (BK)

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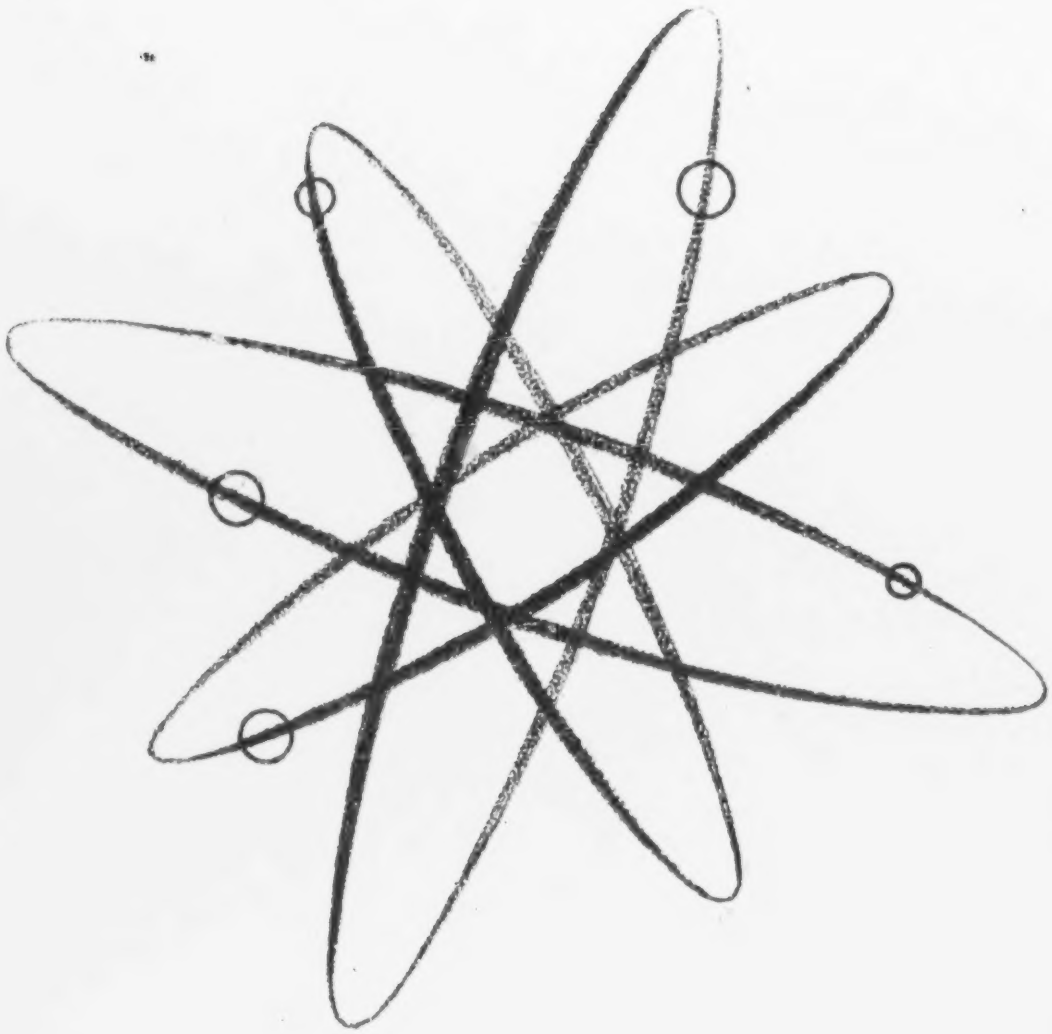

THREE-YEAR LONGITUDINAL STUDY COMPARING INDIVIDUALIZED AND BASAL READING PROGRAM AT THE PRIMARY LEVEL: AN INTERIM REPORT

EDUCATIONAL RESEARCH

RE 000 016

PREFACE

This is an interim report. It is hoped that a complete and final report will be ready for publication later this year. This is also a first report and as such is especially intended to answer some of the more pressing questions which have come from participants of member schools.

The writers appreciate the patience with which the Lakeshore Curriculum Study Council has anticipated this report. Five years have passed since the Reading Committee and this research project were initiated. During that time, thousands of volunteer teacher and researcher man-hours were given to this project, with the approval of member schools, and represent time and money which cannot be measured. The committee estimates that an equivalent study totally financed by an outside agency would cost well over $100,000. Even more valuable are the in-service improvements which came about because classroom teachers were involved in some way with this project.

The committee is amazed, grateful and extremely humble in the face of the willingness and the skill of these public school people to define and to tackle such a task. Nothing is more indicative of the strength, the intelligence, and the vigor of American education than this type of activity.

L. C. S. C. Reading Committee

Rodney Johnson, Chairman
John Belton
James Macdonald
Alice Sommerfield
Robert Phelps

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MAJOR FINDINGS

1. Children in individualized reading programs show significantly better reading achievement than children in basal reading programs.

2. The range of achievement test scores in the basal group was greater than the range of achievement test scores in the individualized group.

3. Girls in both the individualized and basal reading programs obtained higher achievement test scores than boys in their respective program.

4. Achievement test score differences between boys and girls within the individualized group were significantly less than the achievement test score differences between boys and girls in the basal group.

5. Children in basal reading programs read more while in third grade than children in individualized reading programs.

CHAPTER I

THE PROBLEM AND RELATED LITERATURE

The Problem

In recent years the development of a new approach to reading instruction in the elementary schools has gained considerable popularity among teachers who are looking for new ways to meet the individual needs of children. Labeled "individualized reading", this approach attempts to put emphasis on individual rather than group instruction; on reading trade books and a variety of materials selected by children rather than reading textbooks selected for children; and on learning skills while reading rather than learning skills in order to read.

A controversy has developed between those who support individualized reading programs and the adherents of basal reading programs as to which is the better way to teach reading. Individualized reading enthusiasts favor a plan which employs teacher-pupil conferences, flexible grouping, pupil-selected materials and a highly individualized non-sequential order of presentation of reading skills. Advocates of basal reading programs endorse group instruction using carefully selected and prepared materials which assure the logical, sequential development of reading skills at the proper grade levels.

The purpose of this research project was to study, under carefully defined and controlled conditions and for long duration, the various results of basic and individualized reading programs. Large numbers of children, enrolled in public school classrooms, were studied during their first three school years. It was hoped that the study

would be fruitful as a comparative analysis of these two reading programs and that confidence in its results would be increased by the broad base of the study in forms of adequate sample, duration, and research design.

Related Literature

Research relating to individualized reading is limited, both in quantity and in quality. Interest in the subject is relatively new, having come about as recently as the late 1950's, although a few studies were reported earlier. The limitations of research studies which compare individualized reading with basal reading is shown quite clearly in an annotated bibliography compiled by Groff.[1] Thirty-eight entries draw comparisons of some kind, while thirty-nine sources are descriptive of individualized reading programs only. Further, of the studies which are comparative, by far the majority are inconclusive and subject to question. Most are studies of from one to five classes and for periods of from six weeks to six months, and might be judged to be inadequate in terms of sample, duration, or design.

Many pioneer studies of individualized reading are, of course, worth reviewing. In a study of his own class, Sperber[2] found that pupil and parent reactions to individualized reading programs were

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[1]Patrick Groff, "Comparisons of Individual (IR) and Ability-Grouping (AG) Approaches as to Reading Achievement, "Elementary English, 40: 258-264, March, 1963, (first noted as an unpublished annotated bibliography in mimeograph form).

[2]Robert Sperber, "An Individualized Reading Program in a Third Grade," Individualized Reading Practices, New York: Teachers College, Columbia University, 1958, pp. 44-54.

positive; in a one-year study of five groups of children in which teachers had been trained in the techniques of individualized reading, Jackson[3] found that sufficient gains were made to recognize the worth of the program; studying eighty-six children, Walker[4] found that gains in comprehension and vocabulary were such that the results tended to support individualized reading programs.

McCristy[5], in comparing four individualized reading classes with four ability-grouped basal reading classes, reported that the individualized classes made significantly greater gains over one school year in vocabulary, reading comprehension, and total reading scores.

Statistically significant differences favoring individualized reading were found in measures of silent reading comprehension and total silent and oral achievement by Acinapuro[6] in a controlled study of paired classes in grades four, five, and six.

In spite of limited research, personal stands, either supportive or in opposition, have been vigorous. And because of the lack of

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[3]Joseph Jackson, "A Reading-Center Approach within the Classroom," Journal of Educational Psychology, 47:213-222, April, 1956.

[4]Fredric R. Walker, "Evaluation of the Methods of Teaching Reading, Seventh Grade," Journal of Educational Research, 54: 356-358, May, 1961.

[5]Antoinette McChristy, "A Comparative Study to Determine Whether Self-Selective Reading Can Be Successfully Used at the Second Grade" (unpublished Master's Thesis, The University of Southern California, Los Angeles, 1957).

[6]Philip Acinapuro, "A Comparative Study of the Results of Two Reading Programs" (unpublished Doctoral dissertation, Teachers College, Columbia University, New York, 1959).

statistical evidence these stands have, for the most part, been attempts to discredit the opposition rather than support a cause. Fay[7] referred to individualized reading as "a potentially hot topic with elementary teachers, supervisors and principals."

The issue involved seems not to be whether some form of individualized instruction is appropriate to successful reading programs, but rather, whether individualized reading can be a total reading program.

Lazar[8] wrote that "...individualized reading is a way of thinking about reading - an attitude toward the place of reading..." and as such shouldnot be confused with individualized instruction, extension reading or recreational reading. Individualized reading is not an adjunct to a basic reading program; it is built upon a philosophy and a psychology which will fulfill the requirements of a sound educational reading program.

According to Harris[9] the two programs are incompatible and mutually exclusive.

> "Individualized reading requires the complete abandonment of the basal reader and the basal reader system. It is the complete antithesis of the basal reader system in all respects."

Witty,[10] in evaluating individualized reading, cited evidence

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[7]Leo Fay, "Individualized Reading - A Panacea or a Promise" (An address to the Wisconsin ASCD and the Primary Section of the WEA, Milwaukee, November 1962).

[8]May Lazar, "Individualized Reading: A Dynamic Approach," The Reading Teacher, 11:75-83, December, 1957.

[9]Beecher Harris, "Preparing to Think About Individualized Reading," Phi Delta Kappan, 43:218-222, February, 1962.

[10]Paul Witty, "Individualized Reading-A Summary and Evaluation," Elementary English, 36:401-412, October, 1959.

that group instruction has unmistakable value, and further, that in spite of the interest and, in some studies, the effectiveness, total dependence upon individualized reading cannot be justified. He and Sartain[11] both indicate that the most defensible program in reading will combine the best features of both individualized and group instruction.

In a scathing response, Veatch[12] raises a number of "controversial irreconcilable" issues. These issues relate the physical, mental, and emotional growth of children to such variables as teacher-made assignments, ability grouping, year-in-year-out repetition of lessons, relating reading skills to needed skills, systematic instruction as it enhances or retards application, necessity of sequential skill development, the self-selection principle and the learning climate in a classroom.

Veatch further admits the need for research in individualized reading but points out that "...we still know little about the total value of any major reading practice." It is too early to judge with any finality that individualized reading is 1) unimportant, 2) a fad, or 3) something good teachers have always done. It is, she says, "...but the beginning of a renaissance in which teaching is returned to the teacher."

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[11]Harry W. Sartain, "The Roseville Experiment with Individualized Reading," The Reading Teacher, 13:277:281, April, 1960.

[12]Jeanette Veatch.. "In Defense of Individualized Reading," Elementary English, 37:277-285, April, 1960.

CHAPTER II

RATIONALE, DEFINITIONS AND HYPOTHESES

Rationale for the Study

The origins of this research project lie in the need to examine differences in approaches to materials, procedures, grouping and sequence, as integral parts of reading programs.

Selection of material. It is recognized that selection of reading material in an individualized reading program is related to what is available. But within the limits of what is available (basal and supplementary readers, trade books, magazines, newspapers, etc.) each child selects his own reading material.

Reading is a form of communication. Humans receive messages when they are interested in the content of the messages. They will also shut out messages when the content seems dull or unimportant to them.

Basal readers are, by and large, written to interest mythological average children. They are often either boring or unrelated to the background of a large group of school children. There is reason to doubt that basal readers provide the kind of stimulus to youngsters which would maximize their desire to receive communication from them.

Self-selection, it is argued, provides the maximum opportunity for learners to work with materials, basal or otherwise, which will stimulate their desires to find out what the material says.

Instructional procedure. The basic interpersonal learning situation should be a one-to-one relationship, a teacher-pupil conference. The teacher is then focused directly upon the performance of one child and that child has the direct attention of the teacher. Concern for the

influence of others in the class is minimized. The teacher and the pupil have an increased opportunity to develop an intimate sharing and understanding without going outside the curriculum structure.

The individualized reading conference provides a basis for a tutorial relationship which each child approaches as an individual and in which the teacher sees each child in terms of this individuality.

Grouping. Each child has unique ability. No two children fit precisely the same ability group. No two children have the same background, potential, talent, interest or readiness. Ability grouping, then, facilitates learning only to the extent that it makes the teacher's job easier. It does not deal directly with the learning situation. On the other hand, grouping for specific tasks, which may involve children of a wide range of ability, focuses the grouping structure more directly on what is to be learned. In individualized reading, grouping is flexible, based upon short term needs centered around specific objectives, not upon ability.

Sequence. It is denied that learning to read must be tempered by such devices as controlled vocabulary or sequential introduction of skills and learning tasks. Rather, it is proposed that learning to read is related to children's needs and interests in a direct way. The important aspect of learning to read is how children "see" the task, not how experts (who can already read) logically decide the tasks should be presented. There is, furthermore, no generally accepted sequence for developing reading. No two commercial textbooks (basal series) present things in the same cycle, or have the same controlled vocabulary or the same content. The choice is therefore reduced to the acceptance of some

predetermined system or the acceptance of the child's determined needs.

The argument for not predetermining the system is based upon the idea that no matter what system is used it will never fit all children and it will always be adult in origin. Therefore, children should learn skills when they need them to unlock a communication which they wish to receive. In individualized reading, skills and tasks are not presented in a systematic, logical progression.

Methods of selection of reading materials, instructional procedures, grouping and skill sequence development are characteristics which distinguish individualized and basal reading programs.

Definitions of Terms

For the purpose of this research project individualized and basal reading programs are defined in terms of criteria, materials and instructional procedures.

Individualized reading. Individualized reading is defined as a program which meets the following four criteria:

1. Reading material is self-selected by the child with the general guidance of the teacher.
2. The instructional procedure is one-to-one, a teacher-pupil conference.
3. Grouping is flexible and focused on specific tasks for specific youngsters at specific times.
4. There is a non-sequential skill development program.

Individualized reading is a classroom organization where children are taught reading in which the instructional procedure is a one-to-one, or teacher-pupil conference. Task grouping may be used when group instruction is needed. The group is then dissolved as soon as the task is completed.

The material to be read by the children includes trade books (any library book other than a basal reader), other readers, magazines and newspapers. Each child selects his own reading material and reads at his own reading rate. Self-selection is a cardinal rule of the individualized reading program.

The reading conference is a period of close personal relationship between teacher and pupil, a time for specific teaching according to the child's needs. During the conference the teacher probes, questions, and listens to evaluate the child's progress, to diagnose the strengths and weaknesses, and to discover the child's attitudes and interests.

The reading conference varies in duration, generally 5-10 minutes per conference is sufficient. Conferences are scheduled so that every child has an opportunity for a conference as his name appears on the list or as a need develops.

A conference record is kept by the teacher regarding each conference. This record includes notes about the areas in which the child needs help as well as special interests, attitudes and future plans for the individual.

Basal reading. A basal reading program is defined as a program which meets the following four criteria:

1. The reading material is pre-selected and is embodied in a basic series.
2. The instructional procedure is teacher to group.
3. Grouping is consistent over a period of time, although individuals within a group may move to another group.
4. Sequential skills are developed as suggested in the basal reader.

In a basal reading program children are grouped into three or more

achievement groups for instruction in reading. In a heterogeneous classroom, achievement grouping generally follows a pattern of a small group of high achievers, a larger group of average achievers and a third smaller group of low achievers. Children within groups remain together for long-term assignments, but allowances are made for individuals within a group to move to another group if the individual's achievement merits the move.

Basal readers are used in each group according to the instructional level of the group. Workbooks to accompany the basal reader or worksheets are used as part of the basal reading program.

The procedure for each class is indicated in the manual for the basal series being used. A sequential pattern of reading skills is developed as suggested in the basal series teacher's manuals. The class procedure generally follows these four steps:

1. Preparation for reading the story.
2. Reading the story.
3. Development of reading skills.
4. Enrichment reading activities.

Each group meets daily with the teacher. The instructional period for a group is about one-third of the total time allocated for reading. Each group then works independently for the remainder of the reading period.

Reading period and teaching aids. The amount of time allocated to teaching reading each day in classrooms using the basal approach and in classrooms using the individualized approach was virtually the same. Periodic reviews of teachers' schedules and classroom visitations verified the fact that teachers in both groups devoted virtually the same amount of time to teach reading. Slight variations in school days

taught per year between school systems were controlled by collecting data only for a period that coincided with the shortest school calendar.

Teaching aids and other materials within each classroom were nearly the same since classes were paired within schools, one class at a given school building using the basal approach, while a matched class in the same school building used the individualized approach.

All teachers in both the basal group and the individualized group with only one exception had previous teaching experience. All were considered efficient and effective teachers by their supervisors.

Hypotheses

A number of research questions, phrased as hypotheses, follow. Though stated as positively favoring individualized reading, they are intended to be unbiased. The null hypothesis, in each instance of course, would be that there would be no statistically significant differences.

1. Children in individualized reading programs will show significantly higher achievement than children in basal reading programs.
2. Children in individualized reading programs will have greater range of achievement scores than children in basal reading programs.
3. Children in individualized reading programs will show significantly higher oral reading ability than children in basal reading programs.
4. Children in individualized programs will read more than children in basal reading programs.
5. Children in individualized reading programs will show greater self-direction than children in basal reading programs.

6. Children in individualized programs will show better social adjustment than children in basal reading programs.
7. Children in individualized reading programs will develop more positive attitudes toward themselves as readers than children in basal reading programs.
8. Parents of children in individualized reading programs will have more positive attitudes toward their children's reading programs than parents of children in basal reading programs.

Hypothesis 5 was not tested. Procedural and instrumentation problems prevented data from being collected.

Several additional findings related to the achievement test score differences between boys and girls are also reported as a matter of general interest.

CHAPTER III

DESIGN AND PROCEDURE

Pilot Study

This study was carried out on a projected five-year plan. The first year was spent clarifying the definition of individualized reading and developing a research design for the study. A committee consisting of representatives from all interested school systems in the Lakeshore Curriculum Study Council met to discuss, study and formulate the conception of individualized reading used in the study. The committee further agreed that a pilot study was necessary before beginning a large-scale research project.

The second year was devoted to the pilot study, Phase I, reported in Appendix B. In summary, this pilot study provided evidence that the conditions for learning found in those few classes where individualized reading was in operation were as desirable or more desirable than in basal reading situations. With this assurance the committee projected Phase II, the study reported here, on a three-year basis.

Overall Design

Fourteen first-grade experimental and fourteen first-grade control classrooms were located, on a volunteer basis, in cooperating member school systems. Experimental and control classes were paired within seven different school buildings in order to establish some control over possible variations in socio-economic conditions between school districts. All classes were grouped heterogeneously by the usual administrative procedures, and a concerted effort to equalize time periods and materials were made. Each school committed its staff to a three-year (first, second

and third grade) period. A continuous in-service training program was instituted for the three-year period and achievement and other status measures of the children were made at the beginning of the first year and at the ends of the first, second and third years.

In-Service Program

Continuous emphasis was placed on providing learning experiences for both the experimental and control teachers.

In March, 1961, the spring before the study began, three meetings were held. Orientation to the project was given and discussions of the two approaches were held. Planning sessions, consultant help and classroom visitations were scheduled for late spring to help teachers get ready for the fall session. A summer workshop at the University of Wisconsin-Milwaukee was scheduled and conducted with this project in mind.

Continuous workshop meetings were organized and held throughout each of the following three years, interspersed with consultant help on call and some classroom visitations by consultants and by participating teachers. The facilities of the Campus Elementary School at the University of Wisconsin-Milwaukee were an integral part of the early training phases.

In the spring of each succeeding year the teachers for the next year's groups met and began a similar training program. Each year additional teachers entered the program and those participating in earlier phases were encouraged to attend meetings and share experiences even though their part was completed. A large group of interested participants from both groups remained throughout the study.

Data Collected

Many different methods of evaluation and appraisal were used in this

study. Group tests, individual tests, rating scales, log books, sociograms, attitude scales, attendance records, and parent questionnaires were part of the comprehensive testing program designed to obtain as much information as possible about each participant.

Standardized tests were selected by a committee which included college professors, reading specialists and classroom teachers. Psychologists and supervisors of elementary education helped to prepare the rating scales, sociograms and attitude surveys especially constructed for this study.

Routine records included attendance, ages of pupils and size of classes. In addition, specific attention was given to objective measures such as the following:

1. The SRA Primary Mental Abilities Test was administered at the beginning of the first year of the study. A different, appropriate age-level form of this same test was administered at the end of the third year of the study.
2. The Metropolitan Achievement Test Battery was administered annually in May. All parts of the tests were used including the spelling and arithmetic tests.
3. Sociograms were completed in each classroom annually.
4. Reading specialists were employed to conduct personal interviews and test pupils selected at random several times during the experiment. Oral reading ability was evaluated as part of each individual interview.
5. Each classroom teacher kept a log book to record book titles and the number of pages read by individual pupils.

Efforts were made to have as many pupils as possible complete the

three-year program. Final records were maintained only for those pupils who started at the beginning and continued through the three-year study.

Participating school systems were provided with tests for all pupils in a given class.

The tests were administered by the classroom teachers following the directions contained in published manuals or special directions provided. The teachers scored many of the tests but other tests of pupil attitude and interest were scored by clerks especially trained to assist in this phase of the project.

In general, raw scores were used to make comparisons between individuals and groups. Teachers and other persons collecting data were not required to convert raw scores to grade equivalents or percentiles.

Measurement Schedule

Data were collected with reference to the central hypotheses of the study in accordance with the following schedule:

Beginning of First Year

Science Research Associates Primary Mental Ability Test

End of First Year

Metropolitan Achievement Test Battery
- Word Knowledge
- Discrimination
- Reading
- Arithmetic

Sociogram

Self-Concept Scale

Personal Interview
- Oral Reading
- Comprehension
- Word Attack Skills
- Vocabulary

Parent Questionnaire

Teacher Log Books

End of Second Year

Science Research Associates Reading Comprehension Test

Science Research Associates Vocabulary Test

Metropolitan Achievement Test Battery
- Word Knowledge
- Discrimination
- Reading
- Arithmetic

Sociogram

Self-Concept Scale

Personal Interview
- Oral Reading
- Comprehension
- Word Attack Skills
- Vocabulary

Teacher Log Books

End of Third Year

Science Research Associates Reading Vocabulary Test

Science Research Associates Reading Comprehension Test

Science Research Associates Primary Mental Ability Test

Metropolitan Achievement Test Battery
- Word Knowledge
- Discrimination
- Reading
- Spelling
- Total Language
- Arithmetic Concepts
- Arithmetic Problem Solving

Sociogram

Personal Interview
- Oral Reading
- Comprehension
- Word Attack Skills
- Vocabulary

Teacher Log Books

Different school systems were found to vary in the number of days taught each year. Since school calendars were different, teachers were asked to administer the tests used in May and to close their experiment records before the end of their school year in order to achieve uniformity in the number of teaching days considered a part of the research program.

Population

Table I shows the summary of the number of teachers and subjects included in the study.

TABLE I - POPULATION

Year	Basal				Individualized			
	Teachers	Boys	Girls	Total	Teachers	Boys	Girls	Total
1st (1961-62)	14	177	166	343	14	182	183	365
2nd (1962-63)	15	117	99	216	13	128	142	270
3rd (1963-64)	15	80	77	157	14	97	107	204

NOTE: Complete data was not obtained for all pupils at the end of the second year of the study. Complete data in the statistical summary includes 208 pupils in basal reading and 259 pupils in individualized reading..

Two facts are worthy of special mention. During the second year there were only 13 teachers in the experimental group and 15 in the control group. Numbers of pupils decreased as children moved out of the school districts over the years and thus were lost to the study.

At the beginning of the study an inquiry was made to determine if there were significant differences in average pupil age, average size of

classes and/or length of school year for the two groups.

No differences were observed in the average age of pupils in the groups. The average class size in the first grade in the basic group was 25.0 while the average class size in the first grade in the individualized group was 25.86.

Classes were selected at random without regard to the number or sex of pupils within a given class.

Although more than eighty classroom teachers actively participated in this study and more than 700 pupils were enrolled in these classes at one time or another, complete records for the full three-year period of the study were obtained for only 361 pupils.

CHAPTER IV

ANALYSIS AND RESULTS

The results reported in this section are concerned with the total group that used the individualized approach and the total group that used the basic approach to reading. Comparison between teachers, classes, and/or schools or school systems were not planned for and have not been made.

Average scores for each group are reported. The slight difference in size between groups noted in Table I (See Section II) is not significant when average scores are compared.

Certain test results were analyzed using the facilities of the Numerical Analysis Center at the University of Wisconsin in Madison and at the University of Wisconsin-Milwaukee Computer Center.

A summary of some of the important test results and findings is included on the following pages. The data collected at the end of the first and third years is emphasized. Data collected at the end of the second year is also being reviewed. This summary of test results is related primarily to the achievement hypotheses previously defined. A more thorough statistical investigation of the non-achievement aspects of the experiment is planned.

Pre-Experiment Test Results

The Primary Mental Abilities Test published by Science Research Associates was administered at the beginning of the study to determine the average intelligence test scores and average reading readiness scores for the experimental and control groups.

The results of this test are summarized in Table II below. Mean I.Q. scores and the total average raw score on the readiness test are listed.

TABLE II. - EARLY FIRST GRADE TEST RESULTS

Test	Individualized (N=365)	Basal (N=343)	Mean Difference	Z	Level of Significance
I.Q.	108.63	109.00	.37	.44	No significant difference
Reading Readiness	254.5	258.1	3.61	2.05	.05

TABLE II indicates that no statistically significant differences existed in the average I.Q. scores for the groups at the beginning of the experiment. Exactly 55 pupils in the basal group and 53 pupils in the individualized group had I.Q. scores of 120 or higher.

The difference in average raw scores on Reading Readiness was found to be significant at the .05 level. This means that a mean difference this great would occur less than 1 time in 20 by chance alone. Thus, the basal reader group had a significantly higher readiness mean score at the beginning of the experiment.

Achievement Test Results

The first research hypothesis of this study was that the pupils in the individualized reading program would show greater achievement in reading. This hypothesis was tested in several ways. At the end of each school year standardized tests were administered.

Table III below includes the important results obtained at the end of the first grade by both groups on the Metropolitan Achievement Tests.

TABLE III. - VARIABLES, MEANS AND SIGNIFICANCE OF DIFFERENCES BETWEEN GROUPS AT THE END OF THE FIRST GRADE

Test	Maximum Possible Score	Individualized Group (N=365)	Basal Group (N=343)	Difference $\overline{X}_1-\overline{X}_2$	Z	Level of Significance
Word Knowledge	35	30.12	28.18	1.94	4.12	.01*
Word Discrimination	35	29.55	28.33	1.22	2.65	.01*
Reading Comprehension	45	33.61	31.75	1.86	2.54	.01*
Arithmetic	63	51.72	49.36	2.36	2.99	.01*

*Cochran-Cox approximations applied due to significant F's.

The data in the table above indicates that on the basis of the standardized test results obtained, the individualized reading group performed significantly higher on all sub tests at the end of the first year of the study.[1]

At the end of the third year of the study the appropriate level of the Metropolitan Achievement Battery was administered. The results are

[1]It will be remembered that the basal reader group had a significantly higher readiness score at the beginning which makes these results even more striking than they appear at the end of the first year.

summarized in Table IV below.

TABLE IV. - VARIABLES, MEANS AND SIGNIFICANCE OF DIFFERENCES BETWEEN GROUPS AT THE END OF THE THIRD GRADE

Test	Maximum Possible Score	Individualized Group (N=204)	Basal Group (N=157)	Difference $\overline{X}_1 - \overline{X}_2$	t	Level of Significance
Word Knowledge	50	35.1	33.9	1.2	4.18	.01
Word Discrimination	36	28.2	27.3	.9	3.77	.01
Reading Comprehension	44	30.9	29.4	1.5	5.36	.01
Spelling	40	30.4	30.0	.4	1.33	N.S.
Total Language	60	38.6	36.7	1.9	6.79	.01
Arithmetic Computation	47	29.4	26.7	2.7	10.38	.01
Arithmetic Problem Solving	35	21.3	19.3	2.0	8.33	.01

Table IV shows that the individualized group scored significantly higher on all measures except the spelling test at the end of the third year of the study.

In addition to the Metropolitan Test Battery, two separate tests of reading comprehension and reading vocabulary, and the Primary Mental Abilities test published by Science Research Associates were given at the end of the third grade. No significant differences were found in the average intellectual ability scores for each group on the Science Research Associates

Primary Mental Abilities Test.[2]

The Science Research Associates Reading Comprehension and Vocabulary Test results shown in Table V were supportive of the trends established on the Metropolitan Achievement Tests. The individualized reading group had significantly higher scores on both comprehension and vocabulary.

TABLE V. - VARIABLES, MEANS AND SIGNFICANCE OF DIFFERENCES BETWEEN MEANS ON TWO READING TESTS GIVEN AT THE END OF THE THIRD YEAR

Test	Individualized Group (N=204)	Basal Group (N=157)	Difference $\bar{X}_1 - \bar{X}_2$	t	Level of Significance
S.R.A. Reading Comprehension	32.5	31.8	.7	3.76	.01
S.R.A. Reading Vocabulary	28.8	28.3	.5	2.17	.05

The second hypothesis was that the range of achievement within the group using the individualized approach would be greater than the range in the basic group.

The standard deviation was used to describe variability within the distribution of test scores. In general, the greater the standard deviation is, the greater is the range of scores.

Table VI reports the standard deviations on subtests at the end of the third grade. It is apparent in Table VI that the basal reading group, contrary to the predictions of the researchers, displays larger standard

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[2]Even though the total population of pupils in both groups had been halved by attrition rates over the three years there were no significant differences in ability at the beginning or the end of the study.

deviations in all but one case. These differences are significant for the Science Research Associates Tests. The differences on the Metropolitan Tests are not statistically significant but the trend is toward a greater range of scores in the basal group.

TABLE VI. - STANDARD DEVIATIONS ON TESTS ADMINISTERED AT THE END OF THE THIRD GRADE

Test	Individualized Group S. D. (N=204)	Basal Group S.D. (N=157)	F	Level of Significance
S.R.A. Reading Comprehension	4.9	6.0	1.50	.01
S.R.A. Reading Vocabulary	6.2	7.2	1.35	.05
Word Knowledge	8.6	8.5	1.02	N.S.
Word Discrimination	6.7	7.4	1.30	N.S.
Reading Comprehension	8.0	8.7	1.18	N.S.
Spelling	8.4	9.2	1.20	N.S.
Language	8.0	8.5	1.13	N.S.
Arithmetic Computation	7.2	8.1	1.27	N.S.
Arithmetic Problem Solving	6.8	7.3	1.15	N.S.

The third hypothesis investigated required an objective evaluation of the oral reading ability of pupils in the individualized group and in the basal group. The research hypothesis was that oral reading ability would be better in the individualized reading group.

The research design provided that a sample of pupils would be selected at random within each class to be interviewed and tested by reading specialists who were retained to travel from school to school and interview the selected pupils.

During the first year of the study the reading specialists visited

each classroom at least three times. The first visit was scheduled in fall, the second in winter and the third in spring. The reading specialists met with 252 pupils during the first year of the study. Each interview required about 25 to 30 minutes. They interviewed and tested five or six pupils each time they visited a class.

During the second year of the study the reading specialists went back to each classroom twice (in fall and spring) to retest as many as possible of the same pupils they had tested the previous year. Near the end of the third year of the study, all pupils from both the basal and individualized groups,who had been tested individually in grades one and two, were retested a third time.

The reading specialists constructed four tests (See Appendix C) to assess (1) oral reading ability, (2) comprehension, (3) word attack skills, and (4) vocabulary. The maximum raw score on each test was 30 points. The total possible score for any individual thus was four times 30 or 120 points. Each year the tests were revised in what the specialist felt was an appropriate manner for the grade level of the pupils being tested, while the testing procedures and the scoring system remained consistent. Each pupil was tested individually during an interview with the reading specialists.

The average oral reading ability scores obtained by fifty-seven pupils near the end of the first grade and near the end of the third grade are found in Table VII.

TABLE VII. - MEANS AND SIGNIFICANCE OF DIFFERENCES BETWEEN MEANS ON A 30 ITEM ORAL READING ABILITY TEST

Grade	Individualized (N=57)	Basal (N=57)	Difference $\bar{X}_1 - \bar{X}_2$	t	Level of Significance
1st	21.3	22.4	1.1	1.05	N. S.
3rd	27.3	27.7	.3	1.52	N. S.

The slight and statistically insignificant differences between the two groups average oral reading scores supports the conclusion that these two sample groups did not differ in oral reading ability.

The average scores on the other three sub-tests used by the reading specialists also did not reveal any significant differences between the pupils in either group.

Mean scores on these tests administered by the reading specialists at the end of the third grade are included in Table VIII.

TABLE VIII.- MEAN SCORES ON TESTS ADMINISTERED AS PART OF A PERSONAL INTERVIEW

Test	Individualized (N=57)	Basal (N=57)	Level of Significance
Reading Comprehension	16.37	17.42	N.S.
Word Attack	27.28	26.89	N.S.
Vocabulary	27.07	26.44	N.S.

Comparisons of Boys and Girls

Although sex differences were not a central concern or a hypothesis of the study, it seemed useful to summarize these differences for purposes of comparison with past studies.

The computation of mean scores for boys and girls within groups revealed greater differences than mean scores between groups. Table IX lists the mean score differences between sexes within groups at the end of the third year of the study. The first two columns of Table IX include data which is also included in Tables IV and V and has been discussed

previously. It is included in Table IX below for reference.

TABLE IX. - MEAN SCORE DIFFERENCES BETWEEN GROUPS AND MEAN SCORE DIFFERENCES BETWEEN SEXES WITHIN GROUPS ON TESTS ADMINISTERED AT THE END OF GRADE THREE

Test	Mean Difference Between Groups	Level of Significance	Mean Difference Between Sexes	
			Individualized	Basal
S.R.A. Reading Comprehension	.7	.01	1.5*	1.8*
S.R.A. Reading Vocabulary	.5	.05	1.5*	1.0*
I. Q.	2.4	N.S.	0.0	1.4
Word Knowledge	1.2	.01	0.0	.7*
Word Discrimination	.9	.01	1.2*	1.2*
Reading Comprehension	1.5	.01	1.2*	1.6*
Spelling	.4	N.S.	1.9*	1.8*
Language	1.9	.01	3.4*	3.0*
Arithmetic Computation	2.7	.01	1.0*	1.0*
Arithmetic Problem Solving	2.0	.01	0.1	0.2*

*Indicates the girls' performance was superior to that of the boys.

Table IX demonstrates the superiority of girls regardless of group. In the individualized group, girls excelled on all tests except I.Q., Word Knowledge, and Arithmetic Problem Solving. In the basal reading group the girls excelled on every test except I. Q. Adjustments for the overall differences in proportions of boys and girls in the two groups are indicated for all achievement data and will be carried out for the final report.

Tables X through XIV which follow are concerned with achievement test scores obtained by boys and girls. Average raw scores for boys and girls have been converted to grade equivalent scores. Although the original research design did not include hypotheses related to the performance of each sex, the data is included together with a brief explanatory statement in Tables X through XIV.

TABLE X - MEAN GRADE EQUIVALENT SCORES FOR BOTH GROUPS ON ACHIEVEMENT TESTS ADMINISTERED AT THE END OF THIRD GRADE

Test	Individualized	Basal	Difference
Word Knowledge	4.71	4.60	.11
Word Discrimination	4.62	4.46	.16
Reading	4.45	4.34	.11
Spelling	4.87	4.85	.02
Language	4.61	4.34	.27
Arithmetic Computation	4.24	4.08	.16
Arithmetic Reasoning	4.33	4.13	.20

All differences favor the individualized group. These grade equivalent averages for the pupils in the individualized group indicate achievement between the seventy-first and seventy-ninth percentile points on national norms established by the test publisher.

TABLE XI - MEAN GRADE EQUIVALENT SCORES FOR BOYS ON ACHIEVEMENT TESTS ADMINISTERED AT THE END OF THIRD GRADE

Test	Individualized Boys	Basal Boys	Difference
Word Knowledge	4.71	4.56	.15*
Word Discrimination	4.52	4.37	.15*
Reading	4.41	4.21	.20*
Spelling	4.85	4.81	.04*
Language	4.34	4.13	.21*
Arithmetic Computation	4.22	4.06	.16*
Arithmetic Reasoning	4.34	4.12	.22*

*All differences favor the boys in the individualized group.

TABLE XII - MEAN GRADE EQUIVALENT SCORES FOR GIRLS ON ACHIEVEMENT TESTS ADMINISTERED AT THE END OF THIRD GRADE

Test	Individualized Girls	Basal Girls	Difference
Word Knowledge	4.71	4.73	.02*
Word Discrimination	4.68	4.58	.10*
Reading	4.45	4.44	.01*
Spelling	4.93	4.88	.05*
Language	4.86	4.63	.23*
Arithmetic Computation	4.26	4.11	.15*
Arithmetic Reasoning	4.33	4.14	.19*

*All differences except the difference on the Word Knowledge Test favor the girls in the individualized group.

TABLE XIII - MEAN GRADE EQUIVALENT SCORES FOR BOYS AND GIRLS IN THE BASAL GROUP ON ACHIEVEMENT TESTS ADMINISTERED AT THE END OF THIRD GRADE

Test	Basal Boys	Basal Girls	Difference
Word Knowledge	4.56	4.73	.17*
Word Discrimination	4.37	4.58	.21*
Reading	4.21	4.44	.23*
Spelling	4.81	4.88	.07*
Language	4.13	4.63	.50*
Arithmetic Computation	4.06	4.11	.05*
Arithmetic Reasoning	4.12	4.14	.02*

*All differences favor the girls. The magnitude of the difference between sexes within groups as shown in Tables IV and V is much greater in the basal group especially on the Word Knowledge Test and the Reading Test. This indicates that the individualized method enables boys to come close to the achievement levels attained by girls in the same grade.

TABLE XIV - MEAN GRADE EQUIVALENT SCORES FOR BOYS AND GIRLS IN THE INDIVIDUALIZED GROUP ON ACHIEVEMENT TESTS ADMINISTERED AT THE END OF THIRD GRADE

Test	Individualized Girls	Individualized Girls	Difference
Word Knowledge	4.71	4.71	.00*
Word Discrimination	4.52	4.68	.16*
Reading	4.41	4.45	.04*
Spelling	4.85	4.93	.08*
Language	4.34	4.86	.52*
Arithmetic Computation	4.22	4.26	.04*
Arithmetic Reasoning	4.34	4.33	.01*

*All differences except the difference on the arithmetic reasoning test favor the girls.

The amount of reading done by pupils in the individualized group and pupils in the basal group was analyzed using the log books kept by teachers as a source of data. Evidence gathered from teacher logs completed by the first-grade teachers indicated that the average number of pages read per week by pupils in the individualized group was greater than the average number of pages read per week by pupils in the basal group. The average number of pages read per week in the third grade, however, was greater for pupils in the basal group. These results are presented in Table XV below:

TABLE XV - AVERAGE NUMBER OF PAGES READ IN ONE WEEK BY PUPILS IN GRADE THREE - MEDIANS, MEANS, STANDARD DEVIATIONS AND SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS

	Individualized	Basal	Difference $\overline{X}_1 - \overline{X}_2$
Median	181	198	17*
Mean	259.8	322.2	62.4*
Standard Deviation	203.4	331.0	

*Significant at the .01 level.

The log books kept by third-grade teachers revealed a "tremendous" range in the average number of pages read per pupil in a week. As an example, the median number of pages read per pupil in one week in one basal class was more than 600 while the median number of pages read per pupil in another basal class was less than 100. The range in class averages was almost as impressive in the individualized group. Further investigation

of this aspect of the study appears to be warranted and necessary.

Non-Achievement Data

Analysis of sociometric assessments, attitudes toward selves as learners, and parental attitudes toward programs revealed no significant differences between groups to the extent that the results were able to be subjected to statistical analysis. The sociometric device appeared to be especially reliable and valid. Results indicated few sociometric differences between classes following either reading program; that is, no significant differences were observed in the social adjustment of children in either group.

CHAPTER V

SUMMARY OF FINDINGS

	HYPOTHESES	RESULTS
1.	Children in individualized reading programs will show significantly higher achievement than children in basal reading programs.	Significant differences favoring the individualized reading group were obtained.
2.	Children in individualized reading programs will have greater range of achievement scores than children in basal reading programs.	Significant differences were obtained. The direction of the difference indicates the basal group had a greater range of scores.
3.	Children in individualized reading programs will show significantly higher oral reading ability than children in basal reading programs.	No significant differences were obtained.
4.	Children in individualized programs will read more than children in basal reading programs.	Data for the first year tend to substantiate this hypothesis, however, data obtained at the third grade level definitely refute this hypothesis.
5.	Children in individualized reading programs will show greater self-direction than children in basal reading programs.	Not tested due to inability to develop a practical testing procedure.
6.	Children in individualized programs will show better social adjustment than children in basal reading programs.	No significant differences were obtained.
7.	Children in individualized reading programs will develop more positive attitudes toward themselves as readers than children in basal reading programs.	No signficant differences were obtained.
8.	Parents of children in individualized reading programs will have more positive attitudes toward their children's reading programs than parents of children in basal reading programs.	No significant differences were obtained.

CHAPTER VI

IMPLICATIONS

The results of this study clearly indicate that pupils in individualized reading classes achieve at least as well, and probably better in aspects of the reading program which are now measured by standardized tests, than pupils in basal reading programs. The skeptics and critics who have questioned individualized reading on the basis of skill development and achievement are now placed in a position where they must produce contrary evidence. They may well want to take a new look at the possibilities of individualized reading programs. Even if accepted as being only "as good as" basal reader programs, the use of individualized reading techniques may open up new roads for the application of reading as a tool for learning, and free teachers from traditional fears as they become aware of new possibilities for the organization of classroom reading situations. Further, new confidence in the use of individualized instructional techniques may lead to their application in other aspects of teachers' classroom activities.

The results of this study were not clear in regard to the non-achievement data collected. Inconclusive findings, due to inadequate measuring devices and other difficulties, leave much unsaid. Additional research, prefaced by the development of new instruments in these areas, is needed and recommended. It is especially disappointing that the hypothesis concerning self-direction was not directly tested, and that an adequate instrument for measuring self-concept was not developed. These are areas of great importance and certainly warrant considerable effort. There is no reason to believe from this study that the original hypotheses concerning self-direction and self-concept are less tenable

than thought to be at the beginning of the study.

Perhaps the most obvious and heartening benefits of this study, as observed by the researchers, were the in-service activities which stimulated improvements on the part of the classroom teachers who participated in the study. Teachers of both programs looked at their work with new vision for improvement and, indeed, looked at reading programs not like their own with respect and tolerance for the differences which existed.

The results of this study, and the effort put into it, indicate that the research studies most profitable to local schools, in general, will be those in which teachers are personally involved and play an important role.

APPENDIX A

A LIST OF PERSONNEL AND SCHOOL SYSTEMS WHO PARTICIPATED IN THE READING RESEARCH PROJECT

SCHOOL SYSTEM	SCHOOL	GRADE	TEACHER	YEAR	GROUP
WATERTOWN	Lincoln School	1	Lucille Biege	61-62	Basal
	Melvin Damrow, Prin.	2	Caroline Luedtke	62-63	"
L.C.S.C. Rep.		3	Lenys Dietzman	63-64	"
Eugene Tornow	Douglas School				
	Joseph W. Chetoa,	1	Mildred Nack	61-62	Ind.
	Prin.	2	Esther Bornitzke	62-63	"
		3	Gladys Schultz	63-64	"
WEST ALLIS-	Walker School				
WEST MILWAUKEE	William Rilling-Prin.	1	Esther Steidl	61-62	Ind.
		1	M. Christoffersen	61-62	Basal
L.C.S.C. Rep.		1	Jeanette Miller	61-62	"
Robert Johnson		2	Alice Curtis	62-63	"
		2	Marilyn Wernberg	62-63	"
		2	Arline Durand	62-63	Ind.
		3	Sharon Nelson	63-64	Basal
		3	Marilyn Wernberg	63-64	Basal
		3	Amelia Janke	63-64	Ind.
	LaFollettee School	1	Helen Schwartz	61-62	Basal
	A. J. Wunrow-Prin.	2	Judith Jacobs	62-63	"
		3	Marion Giencke	63-64	"
		3	Judith Jacobs	63-64	"
	Irving School	1	Bernice Harper	61-62	Ind.
	James McGurn-Prin.	2	Ruth Reupert	62-63	"
		3	Suzanne Felan	63-64	"
	Madison School	2	Adelle Nygaard	62-63	Basal
	Harry Polzer-Prin.	3	Lois Pollnow	63-64	"
OAK CREEK	Meadowview School	1	Pearl Hamilton	61-62	Basal
	George Hafrichter-	2	Harriet Knutson	62-63	"
L.C.S.C. Rep.	Prin.	3	Gale Hoernke	63-64	"
Monica McCabe	Scanlan School	1	Beverly Rayeske	61-62	Ind.
	Verne Kjell-Prin.	2	Betty Kazmierczak	62-63	"
		3	Betty Kazmierczak	63-64	"

APPENDIX A (Contd.)

SCHOOL SYSTEM	SCHOOL	GRADE	TEACHER	YEAR	GROUP
CEDARBURG	Washington School	1	Marie Kuhefuss	61-62	Ind.
	Arthur Webster-Prin.	2	Katherine Ott	62-63	"
L.C.S.C. Rep.		3	Grace Maves	63-64	Basal
Clarence Thorson					
	Hacker School	1	Dolores Roebken	61-62	Basal
	Arthur Webster-Prin.	2	Barbara Kaestner	62-63	"
		3	Gloria Wetzel	63-64	Ind.
BROWN DEER	Algonquin School	1	Mercedes Khalaf	61-62	Ind.
	David Dimberg-Prin.	1	Norma Doering	61-62	Basal
L.C.S.C. Rep.		2	Louella Buchanan	62-63	"
Joseph Klucarich		2	Mary Jean Kinnel	62-63	Ind.
		3	Debra Kellams	63-64	Basal
		3	Pearl Hennig	63-64	Ind.
	Dean School	1	Judith Rea	61-62	Ind.
	Robert Phelps-Prin.	1	Denise Schaefer	61-62	"
		2	Joyce Schneider	62-63	"
		2	Marge Weisel	62-63	"
		3	Dorothy Gussick	63-64	"
		3	Barbara Hohlweck	63-64	"
	Happy Hill School	1	Irene Witt	61-62	Ind.
	Kenneth Delap-Prin.	1	Eileen Murphy	61-62	Basal
	Norman Valde-Prin.	2	Patricia Kurtz		Ind.
	John Christensen, Prin.	3	Judy Davies	63-64	"
	Maple Tree School	1	Barbara Herman	61-62	Basal
	Kenneth Lindl-Prin.	2	Josephine Sauer	62-63	"
		3	Gay Reineck	63-64	"
	Brown Deer School	1	Lillian Kellett	61-62	Basal
	Norman Valde, Prin.	2	Judy Blazek	62-63	"
		3	Gail Weltzien	63-64	"
GLENDALE	Good Hope School	1	Alice Johnson	61-62	Ind.
	Raymond Lutz-Prin.	2	Jean Russell	62-63	"
L.C.S.C. Rep.	Robert Phelps-Prin.	3	Claire Bierman	63-64	"
Helen Conley					
	Parkway School	1	Joan Nelson	61-62	Basal
	Roger Tietz-Prin.	2	Margaret Lembcke	62-63	"
		3	Lucille Hanna	63-64	"

APPENDIX A (Contd.)

SCHOOL SYSTEM	SCHOOL	GRADE	TEACHER	YEAR	GROUP
SOUTH MILWAUKEE	Lakeview School	1	Evelyn Flynn	61-62	Ind.
	Rodney Johnson-Prin.	1	Diane Thoenes	61-62	"
L.C.S.C. Rep.					
Roger Schaus		2	Josephine Logic	62-63	Basal
		2	Josephine Looker	62-63	Ind.
		3	Anita Popp	63-64	Ind.
		3	Sally McKendriek	63-64	Basal
	Hawthorne School	1	Evelyn Baraboo	61-62	Ind.
	Henry Michaels-Prin.				
CUDAHY	Lincoln School	1	Rita Klippel	61-62	Basal
	John Wohlfarth-Prin.	1	Marguerite Kalile	61-62	Ind.
L.C.S.C. Rep.					
Thelma Shepherd		2	Ruth Hanson	62-63	Basal
		2	Genevieve Desslock	62-63	Ind.
		3	Shirley Reuther	63-64	Basal
		3	Nina Fellwock	63-64	Ind.
	Washington School	1	Bessie Waters	61-62	Basal
	Helen Getzin-Prin.	2	Rebecca Frank	62-63	"
		3	Ellen Disch	63-64	"
	J.E. Jones School	1	Marie Pavlovich	61-62	Ind.
	A. J. Tarmin-Prin.	2	Betty Heyde	62-63	"
		3	Elizabeth Meixner	63-64	"

APPENDIX B

SUMMARY OF A REPORT TO THE LAKESHORE CURRICULUM STUDY COUNCIL CONCERNING THE PILOT STUDY ON "INDIVIDUALIZED READING"

In the fall of 1959, a committee composed of members from interested school systems in the Lakeshore Curriculum Study Council met to propose a study of Individualized Reading practices.

The committee defined a study involving matched experimental and control groups from a number of schools to take place over a three-year period. It became apparent that it would be impossible to institute this study during the 1959-60 school year. An objection was also raised concerning the willingness of member school systems to begin an individualized reading program without some sort of evidence to justify the procedure.

With these two factors in mind, the committee developed a pilot study plan, called Phase #1, to take place during the 1959-60 school year in preparation for the larger, Phase #2, study.

THE PILOT STUDY

Area of study. The effectiveness of individualized reading instruction.

Purpose of the study. To assess whether the conditions for learning in classrooms varied according to the present reading programs of selected teachers who represented a wide range of reading practices.

Procedure. All first, second and third grade teachers in South Milwaukee, Watertown, West Allis and at the Campus School were interviewed by committee members. The interview was so constructed that the committee was able to analyze teacher responses in terms of basic reading practices on a dimension of more or less individualization of instruction. Four types of programs were identified by this procedure:

APPENDIX B (Contd.)

Type #1-- Individualized

Type #2-- Basic groups with planned-for individualization

Type #3-- Basic groups with incidental but some individualization

Type #4-- Basic groups with little or no individualization

Each teacher in the participating schools was placed in one of the above categories, according to type of program.

Next, a random selection of teachers was made according to grade level, type of program and school system; i.e., a cluster-stratified-random sample. A few adjustments were necessary because of special circumstances, but when a teacher was dropped another was drawn from a common pool. The final population consisted of twelve teachers--one teacher of each type at each grade level.

At this point an observation team of three people from participating systems began training for visitations to these twelve teachers. The Macdonald-New York University rating scale was selected to assess the conditions of learning present in classrooms. The instrument contains fifteen scales which measure the following conditions:

1. Basis and function of social control. Is control shared? Does the teacher make most decisions? Are there rules and are the children aware of them? Can children predict the basis of control?
2. Children's involvement in learning experiences. Are the children interested in what they are doing? Are they investing emotional energy in the learning experience? Is there a sense of importance and eagerness about their own activity in the learning experience?

APPENDIX B (Contd.)

3. Children's participation in evaluation. Do the children take all their evaluation cues from the teacher? Are they actively involved in evaluation? Is self-evaluation an integral part of their experiences?

4. Children's response to and use of materials and resources. Are the children interested and/or involved with materials? Do children use materials on their own initiative or only as directed? Do children create materials and/or use them as resources for interrelated learnings?

5. Children's response to each other. Do children apparently respect each other and each other's rights? Is there an easy acceptance of each other? Are there signs of affection toward each other? Are children sensitive to each other's feelings and attitudes?

6. The children's response to the teacher as a guide to learning. Are the children fully engaged in learning activities? Do the children accept the teacher's guidance and direction?

7. Children's response to the teacher as a person. Do the children like the teacher as a person? Do they seek her out as a friend?

8. Communality or complimentarity of teacher-pupil purposes. Given a task, are the teacher's purposes for this task in conflict with the pupils' purposes for activity? Is there a positive correlation between pupil and teacher purposes?

9. Content organization for teaching. Does the teacher have the content well in mind that he wishes to deal with for that day? Has he clarified his instructional objectives and related them in a meaningful way?

APPENDIX B (Contd.)

10. Interpersonal contact (task oriented). Are all children given opportunities to be included in class tasks? Does the teacher focus on a segment to the exclusion of others? Are learning activities flexible enough for productive interpersonal contact?

11. Knowledge of children and their differences. Does the teacher know his pupils as individuals? Does he know the group? Does he make allowances for individual and group differences?

12. Planning for and utilization of the evaluation process. Does the teacher see how and attempt to evaluate the attainment of objectives? Has he selected some appropriate technique for evaluation? Is evaluation an integral part of the learning situation?

13. Teacher competence in subject matter. Does the teacher seem well versed in content? Does he make many mistakes, give misinformation about facts, concepts or processes (using reasons, etc.)? Does he allow for children to add to content, or does he control content rigidly?

14. Teacher knowledge of and preparation of materials. Does the teacher have a variety of materials present? Are the materials of good quality? Are materials appropriate for the teacher's aims? Has the teacher gone beyond the standard and/or been creative in his preparation?

15. Teacher vitality, awareness, alertness. Does the teacher have a quality of vital awareness? Does he live his teaching or does he treat it as a social role? Is his performance perfunctory and disinterested in contrast to being imaginative and creative?

APPENDIX B (Contd.)

When the training was concluded a schedule of visitation was set up for three observers over a three-week period. Each of the twelve teachers was visited three times, each time by a different pair of observers. Observers were paired to provide reliability checks on the ratings. Each visit lasted from forty to sixty minutes, during which time the teacher was working in what she felt was her basic developmental reading program. The three visits provided six individual ratings for each teacher on the fifteen scales.

RESULTS OF THE STUDY

Reliability of ratings. The Kendall Coefficient of Concordance was used to assess agreement. The agreement among the three raters obtained by this method was +.36.

Agreement was positive and statistically significant beyond the .001 level; i.e., what agreement there was could be accounted for by chance alone only once every one thousand times the experiment was run.

Variations in conditions of learning found among the four types of programs. Mean ratings were computed for each of the fifteen items listed. It should be pointed out that the greatest difference in mean ratings occurred in item eleven, knowledge of children and their differences, with the individualized programs scoring significantly higher.

The Sign Test was applied to a comparison of the direction of mean differences for each type of program. By this method the difference in direction between programs one and two could be accounted for by chance

only once every one thousand times; i.e., (.001) for a 14-1 ratio. The difference in direction between programs two and three is also significant at the (.001) level. The difference in direction between programs three and four is not statistically significant and could easily be accounted for by chance.

INTERPRETATIONS

The reliability of the ratings was not as high as expected. The coefficient of concordance is, however, not directly comparable with other correlation techniques. In terms of the nature of the data the concordance is best described as fair, rather than low. A breakdown of inter-rater assessments also indicates that two of the three raters were in considerably higher agreement than either of these raters was with the third. It is felt that the use of mean scores has partially overcome this disagreement and gives greater meaning to the results.

The results indicate that reading programs were differentiated into three groups. Type three and four were either artificial categories or were a result of inadequate assessment of reading programs. Given three categories rather than four there was, apparently, a systematic decrease in the occurrence of desirable conditions for learning in classrooms as programs became less individualized; or, the more individualization in a reading program, the greater the occurrence of desirable conditions for learning.

LIMITATIONS

1. The study dealt only with "conditions of learning."
2. Each rater had some familiarity with a few of the teachers in the

study, which produced a limited but apparent rating bias toward persons and school systems.

3. The study, as a pilot study, was limited to twelve teachers.

CONCLUSIONS

It is not possible to conclude from this study that individualized reading programs are better than group programs. This is because of the nature of the limitations of the study. It is possible to conclude, however, that there is no apparent reason to believe that individualized reading programs will lower the quality of reading instruction in the primary grades. What evidence exists, though not conclusive, would indicate the possibility of higher quality in individualized programs.

FURTHER RESEARCH

The committee now feels that Phase #2 should be instituted by cooperative research among member school systems in the Lakeshore Curriculum Study Council. Basic assurance of the worth of individualized programs has been provided, and the scene is now set for a large scale, well-controlled study, and comparison of reading programs in terms of a wide variety of reading outcomes.

APPENDIX C

SAMPLE OF PERSONAL INTERVIEW TEST

During grade one, 36 per cent of the total population or 252 children were interviewed by a reading consultant. These interviews were conducted in December, February and May.

During grade two, 33 per cent of the total population or 162 children were interviewed. These interviews were conducted in November and April.

During grade three, 34 per cent of the total population or 121 children were interviewed. The interview was conducted in April.

Appointments were made with each teacher prior to each interview. From a random sampling children were selected from each classroom. The interview lasted about thirty minutes per child.

The following three pages show the sheets used to record the reading skills which were checked at the time of each personal interview.

The Wide Range Reading Test was administered to each child as part of the personal interview. Average scores on this test are included below:

MEAN GRADE EQUIVALENT SCORES ON THE WIDE RANGE READING ACHIEVEMENT TEST ADMINISTERED AS PART OF A PERSONAL INTERVIEW NEAR THE END OF EACH SCHOOL YEAR

Grade	Individualized	Basal
1st	2.66	2.46
2nd	3.91	3.59
3rd	4.61	4.51

APPENDIX C (Contd.)

INTERVIEW AT END OF GRADE ONE

School_____ Date_____ Teacher_____

Name_____ C.A._____(_____) Plan____

Test Data

_____ _____

_____ _____

Reading Level

Name of book_____ Pages_____

____I. Quality of oral reading- (30 points) _____ (about 100 words)

A. Teacher pronounces_____ F. Reversals_____

B. Omissions_____ G. Ignores punctuation_____

C. Additions_____ H. Points_____

D. Substitutions_____ I. Loses Place_____

E. Repetitions_____ J. Fluency_____

____II. Comprehension - (30 points)

_____

Botel Word Opposite Test_____

____III. Vocabulary Tests (30 points)

Number correct out of 30 words_____

Wide Range Reading Tests_____

____IV. Word Attack Skills (30 points)

Consonant - Substitution_____

Compound Words_____

Endings_____

____ Total

APPENDIX C (Contd.)

INTERVIEW AT END OF GRADE TWO

School_____ Date_____ Teacher_____

Name_____ C.A.___(_____) Plan_____

Test Data

_____ _____

_____ _____

Reading Level

Name of book _____Pages_____

____I. Quality of oral reading-30 points (Dr. Sheldon's Test for 2/2 level)

A. Teacher pronounces_____ F. Reversals_____

B. Omissions_____ G. Ignores punctuation_____

C. Additions_____ H. Points_____

D. Substitutions_____ I. Loses Place_____

E. Repetitions_____ J. Fluency_____

____II. Comprehension - 30 points (Dr. Sheldon's Test for 2/2 level)

___III. Vocabulary Tests - 30 points (Dr. Botel's Vocabulary Test)

Wide Range Reading Test (give grade level)_____

____IV. Word Attack Skills - 30 points

A. Vowels - 20 points _____

B. Blends - 5 points _____

C. Endings - 5 points _____

____Total

APPENDIX C (Contd.)

INTERVIEW AT END OF GRADE THREE

School_____ Date_____ Teacher_____

Name_____ C.A._____ Plan_____

Test Data

_____ _____

_____ _____

Reading Level

Name of book_____ Pages_____

_____I. Quality of oral reading - 30 points (Dr. Sheldon's Test for 3/2 level)

A. Teacher pronounces_____ F. Reversals_____

B. Omissions_____ G. Ignores punctuation_____

C. Additions_____ H. Points_____

D. Substitutions_____ I. Loses Place_____

E. Repetitions_____ J. Fluency_____

_____II. Comprehension - 30 points (Dr. Sheldon's Test for 3/2 level)

____III. Vocabulary Tests - 30 points (Dr. Botel's Vocabulary Test)

Wide Range Reading Test (give grade level) _____

_____IV. Word Attack Skills - 30 points

A. Vowel Rules - 8 points_____

B. Syllabication - 5 points_____

C. Root Words - 5 points _____

D. Dictionary Skills (alphabetical order) 10 points_____

E. Contractions - 2 points _____

_____Total

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